the root, but was wholly without acrimony. The same experiment was repeated with alcohol, and vinegar, and afforded similar results. In every case the liquid remaining in the retort was also without pungency.

Some slices of the root were digested in proof spirit in a close stopped phial. The portions of root retained their acrimony at the end of some weeks, but had imparted none to the spirit. At the end of two years, the root was examined and found destitute of acrimony, as were also the whole contents of the phial.

Suspecting that the acrid principle of this plant must escape in form of gas during the processes which have been mentioned, the following experiment was made. A quantity of the bruised root and stalks were placed in a vessel of water. A glass receiver was filled with water and inverted over them, and sufficient heat applied to raise the water nearly to the boiling point. From the beginning of the process, bubbles of air continued to escape from the plant, and were collected in the upper part of the receiver. In the course of half an hour, a considerable quantity of permanent gas was obtained. A part of this gas, after cooling, was transferred to a phial, in which was a small quantity of atmospheric air. On presenting a lighted paper to the mouth of this phial, it exploded with a very distinct report. Another portion of the gas was agitated with lime water, which it rendered turbid. This circumstance was probably owing to the mixture of carbonic acid disengaged from the plant, or from the water by boiling.

From the above experiments, which circumstances did not permit me to pursue, it appears that the acrimony of the Arum resides in a principle having no affinity for water, alcohol, or oil, being highly volatile, and, in a state of gas, inflammable. The products of its combustion, as well as its other affinities, remain to be investigated.*

The acrimony of the Arum when fresh is too powerful to render its internal exhibition safe. The roots, when dried whole, retain a small portion of their pungency, and in this state they have been given by some practitioners in the country for flatulence, cramp in the stomach, &c. also for

* The acrimony of the Ranunculi, which approaches that of the Arum, is lost by drying, yet is soluble in water, and passes over with it in distillation. That of Polygonum hydropiper disappears in decoction and distillation. The same takes place with several other acrid plants which I have examined. Some inquiries into the *acrid principle* of vegetables I am in hopes to render more mature at a future period.

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